



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,169	01/12/2001	Ursula Murschall	00/002 MFE	2792
38263	7590	11/25/2005	EXAMINER	
PROPAT, L.L.C. 425-C SOUTH SHARON AMITY ROAD CHARLOTTE, NC 28211-2841			BERNATZ, KEVIN M	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 11/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/760,169

Applicant(s)

MURSCHALL ET AL.

Examiner

Kevin M. Bernatz

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-11 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-11 and 19-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

1. Amendments to the claims, filed on September 8, 2005, have been entered in the above-identified application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Examiner's Comments

3. Regarding the limitation(s) "low-flammability" in claims 1 – 6, 8 – 11 and 19 - 22, the Examiner has given the term(s) the broadest reasonable interpretation(s) consistent with the written description in applicants' specification as it would be interpreted by one of ordinary skill in the art. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Donaldson Co., Inc.*, 16 F.3d 1190, 1192-95, 29 USPQ2d 1845, 1848-50 (Fed. Cir. 1994). See MPEP 2111. Specifically, the Examiner has interpreted this term to be equivalent to the term "flame retardancy", as defined in applicants' specification (page 3, 3rd full Paragraph), i.e. that the film "complies with the conditions of DIN 4102, Part 2"
4. Regarding the limitation(s) "UV-resistant" in claims 1 – 6, 8 – 11 and 19 - 22, the Examiner has given the term(s) the broadest reasonable interpretation(s) consistent with the written description in applicants' specification as it would be interpreted by one of ordinary skill in the art. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023,

Art Unit: 1773

1027 (Fed. Cir. 1997); *In re Donaldson Co., Inc.*, 16 F.3d 1190, 1192-95, 29 USPQ2d 1845, 1848-50 (Fed. Cir. 1994). See MPEP 2111. Specifically, "UV resistance means that the films suffer no damage or only extremely little damage when exposed to sunlight or other UV radiation, and therefore that the films are suitable for outdoor applications and/or critical indoor applications" (*specification, page 4, first paragraph*).

5. Regarding the limitation(s) "adhesion promoters" in claim 3, the Examiner has given the term(s) the broadest reasonable interpretation(s) consistent with the written description in applicants' specification as it would be interpreted by one of ordinary skill in the art. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Donaldson Co., Inc.*, 16 F.3d 1190, 1192-95, 29 USPQ2d 1845, 1848-50 (Fed. Cir. 1994). See MPEP 2111. Specifically, the Examiner notes that any coating which leads to improved bonding can be considered as an "adhesion promoter".

6. Regarding the limitation(s) "complying with the conditions of UL 94" in claim 21, the Examiner has given the term(s) the broadest reasonable interpretation(s) consistent with the written description in applicants' specification as it would be interpreted by one of ordinary skill in the art. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Donaldson Co., Inc.*, 16 F.3d 1190, 1192-95, 29 USPQ2d 1845, 1848-50 (Fed. Cir. 1994). See MPEP 2111. Specifically, the Examiner notes that applicants' specification defines what the UL 94 test is (*page 3, 4th full paragraph*).

7. The Examiner wishes to note that claim 10, while further limiting the phenolic stabilizers in claim 9, never actually requires that the phenolic stabilizers are present. I.e. a dependent claim includes each and every limitation of the claims from which it

Art Unit: 1773

depends on, so claim 10 technically recites that the film contains 0.1 to 1.0 wt% of a hydrolysis stabilizer selected from the Markush group in claim 9, except the generic "phenolic stabilizers having a molar mass about 500 g/mol" is replaced by the more specific phenolic stabilizers listed in claim 10. Should applicants wish to positively require the claim 10 phenolic stabilizers to be present in the covered film, they are recommended to reword claim 10 to recite "wherein the hydrolysis stabilizer is a phenolic stabilizer selected from pentaerthrityl ...".

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1 – 6, 8 – 10 and 19 – 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 21 of copending Application No. 09/757,721 in view of Campbell et al. (U.S. Patent No. 4,824,723). This is a provisional obviousness-type double patenting rejection. The

Examiner notes that the pending claims of the copending applications, if not immediately available to applicants' agent, are available through public PAIR.

App '721 claims a substantially identical film, except does not positively recite a UV stabilizer meeting applicants' claimed limitations.

However, Campbell et al. teach adding a UV stabilizer to the outer layers of a multilayer laminate to provide resistance to UV radiation (*col. 8, lines 25 – 37*).

It would, therefore, have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of App '721 to include a UV stabilizer as taught by Campbell et al., since adding a UV stabilizer to the outer layers of a multilayer laminate will provide resistance to UV radiation.

While App '721 does disclose flammability that "complies with the conditions of DIN 4102" (*claim 18*), App ' 721 does not explicitly disclose films "satisfying the requirements of UL 94 VTM-0" or of obtaining the flammability resistance only by the organic phosphorous compound. However, the Examiner notes that Campbell et al. teach that one can preferably attain this high level of flammability resistance by addition of organic phosphorous compounds (*col. 2, lines 48 – 53; col. 3, line 57 bridging col. 4, line 7; and examples*).

10. Claims 1 – 6, 8 – 10, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-30 of copending Application No. 10/181,505 in view of Campbell et al. ('723). This is a provisional obviousness-type double patenting rejection. The Examiner notes that the

pending claims of the copending applications, if not immediately available to applicants' agent, are available through public PAIR.

App '505 claims a substantially identical film, except does not positively recite the haze, yellowness and/or thickness limitations

However, Campbell et al. teach films possessing good mechanical, optical and flame resistant qualities meeting applicants' claimed thickness (*col. 2, lines 35 – 53*), haze (*examples*) and yellowness (*examples*) limitations .

It would, therefore, have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of App '505 to meet applicants' claimed thickness, yellowness and haze values as taught by Campbell et al., since such a film possesses a good combination of mechanical, optical and flame resistant properties.

App '505 does not explicitly disclose flammability that "complies with the conditions of DIN 4102, Part 2", films "satisfying the requirements of UL 94 VTM-0" or of obtaining the flammability resistance only by the organic phosphorous compound. However, the Examiner notes that Campbell et al. teach that one can preferably attain this high level of flammability resistance by addition of organic phosphorous compounds (*col. 2, lines 48 – 53; col. 3, line 57 bridging col. 4, line 7; and examples*).

11. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1- 30 of copending Application No. 10/181,505 in view of Campbell et al. ('723) as applied

above, and further in view of Rogers et al. (U.S. Patent No. 5,804,626). This is a provisional obviousness-type double patenting rejection.

App '505 and Campbell et al. are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 – 30*).

Neither of the above disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

Art Unit: 1773

12. Claims 1 – 6, 8 – 10, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3 - 16 of copending Application No. 09/767,057 in view of Campbell et al. ('723) and Bennett et al. (U.S. Patent No. 5,919,536). This is a provisional obviousness-type double patenting rejection. The Examiner notes that the pending claims of the copending applications, if not immediately available to applicants' agent, are available through public PAIR.

The basis of this rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: haze (*Campbell et al. – examples*) and longitudinal modulus (*Bennett et al. – col. 13, lines 4 – 8 and examples*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

13. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3 - 16 of copending Application No. 09/767,057 in view of Campbell et al. ('723) and Bennett et al. (U.S. Patent No. 5,919,536) as applied above, and further in view of Rogers et al. ('626). This is a provisional obviousness-type double patenting rejection.

The base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 - 30*).

None of the above base references disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

14. Claims 1 – 6, 8 – 10, 19 and 20 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 31 of copending Application No. 10/182,538 in view of Campbell et al. ('723), Bennett et al. ('536), Murschall et al. (DE 196-30-599), Peiffer et al. (U.S. Patent No. 5,716,570)

and Peiffer et al. (U.S. Patent No. 5,955,181). This is a provisional obviousness-type double patenting rejection. See provided English Translation of DE '599. The Examiner notes that the pending claims of the copending applications, if not immediately available to applicants' agent, are available through public PAIR.

The basis of this rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: luminous transmittance (*Campbell et al. – examples*), surface gloss (*Peiffer et al. '181 – col. 9, lines 34 – 44 and examples*), haze (*Campbell et al. – examples*), yellowness (*Campbell et al. – examples*), longitudinal modulus (*Bennett et al. – col. 13, lines 4 – 8 and examples*), and the type of hydrolysis stabilizer (*DE '599 – pages 6 – 7 and Peiffer et al. '570 – col. 3, lines 17 - 38*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

15. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3 - 16 of copending Application No. 10/182,538 in view of *Campbell et al. ('723)*, *Bennett et al. ('536)*, *Murschall et al (DE 196-30-599)*, *Peiffer et al. (U.S. Patent No. 5,716,570)* and *Peiffer et al. (U.S. Patent No. 5,955,181)* as applied above, and further in view of *Rogers et al. ('626)*. This is a provisional obviousness-type double patenting rejection.

The base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 - 30*).

None of the above base references disclose the "cracking" limitation in claim 21. However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

16. Claims 1 – 6, 8 – 10, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 28 of copending Application No. 10/182,317 (U.S. Patent No. 6,709,731 B2) in view of Campbell et al. ('723), Bennett et al. ('536) and Peiffer et al. (181); – **and** -

17. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 28 of copending Application No. 10/182,317 (U.S. Patent No. 6,709,731 B2) in view of Campbell et al. ('723), Bennett et al. ('536) and Peiffer et al. (181) as applied above, and further in view of Rogers et al. ('626).

The basis of main rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: luminous transmittance (*Campbell et al. – examples*), surface gloss (*Peiffer et al. – col. 9, lines 34 – 44 and examples*), haze (*Campbell et al. – examples*), yellowness (*Campbell et al. – examples*), longitudinal modulus (*Bennett et al. – col. 13, lines 4 – 8 and examples*), and thickness of the film (*Campbell et al., col. 2, lines 48 – 53*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

Regarding the rejection of claims 21 and 22, the base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 – 30*).

None of the above base references disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (see *examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

18. Claims 1 – 6, 8, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 09/781,628 (U.S. Patent No. 6,936,350 B2) in view of Campbell et al. ('723), Bennett et al. ('536) and Peiffer et al. (181); – **and** –

19. Claims 9 and 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 09/781,628 (U.S. Patent No. 6,936,350 B2) in view of Campbell et al. ('723), Bennett et al. ('536) and Peiffer et al. (181) as applied above, and further in view of Murschall et al. (DE '599) and Peiffer et al. ('570); - **and** -

20. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 09/781,628 (U.S. Patent No. 6,936,350 B2) in view of Campbell et al. ('723), Bennett et al. ('536) and Peiffer et al. (181) as applied above, and further in view of Rogers et al. ('626).

The basis of main rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: luminous transmittance (*Campbell et al. – examples*), surface gloss (*Peiffer et al. '181 – col. 9, lines 34 – 44 and examples*), haze (*Campbell et al. – examples*), yellowness (*Campbell et al. – examples*), longitudinal modulus (*Bennett et al. – col. 13, lines 4 – 8 and examples*), and thickness of the film (*Campbell et al., col. 2, lines 48 – 53*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

Regarding claims 9 and 10, Murschall et al. (DE '599) and Peiffer et al. ('570) teach adding hydrolysis stabilizers meeting applicants' claimed limitations to films in order to produce films possessing improved stability (*DE '599 – pages 6 – 7 and Peiffer et al. '570 – col. 3, lines 17 - 38*).

Regarding the rejection of claims 21 and 22, the base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the

flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 - 30*).

None of the above base references disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

21. Claims 1 – 6, 8, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 20 of copending Application No. 10/181,752 (U.S. Patent No. 6,689,454 B2) in view of Campbell et al. ('723); **-and -**

22. Claims 9 and 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of

copending Application No. 10/181,752 (U.S. Patent No. 6,689,454 B2) in view of Campbell et al. ('723) as applied above, and further in view of Murschall et al. (DE '599) and Peiffer et al. ('570); - **and** -

23. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 10/181,752 (U.S. Patent No. 6,689,454 B2) in view of Campbell et al. ('723) as applied above, and further in view of Rogers et al. ('626).

The basis of main rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: haze (*Campbell et al. – examples*) and yellowness (*Campbell et al. – examples*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

Regarding claims 9 and 10, Murschall et al. (DE '599) and Peiffer et al. ('570) teach adding hydrolysis stabilizers meeting applicants' claimed limitations to films in order to produce films possessing improved stability (*DE '599 – pages 6 – 7 and Peiffer et al. '570 – col. 3, lines 17 - 38*).

Regarding the rejection of claims 21 and 22, the base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer

Art Unit: 1773

of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 - 30*).

None of the above base references disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days.

The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

24. Claims 1 – 6, 8 – 10, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 25 of copending Application No. 10/181,509 (U.S. Patent No. 6,730,406 B2) in view of Campbell et al. ('723), Bennett et al. ('536) and Peiffer et al. (181); - **and** –

25. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 10/181,509 (U.S. Patent No. 6,730,406 B2) in view of

Art Unit: 1773

Campbell et al. ('723), Bennett et al. ('536) and Peiffer et al. (181) as applied above, and further in view of Rogers et al. ('626).

The basis of main rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: luminous transmittance (*Campbell et al. – examples*), surface gloss (*Peiffer et al. – col. 9, lines 34 – 44 and examples*), haze (*Campbell et al. – examples*), yellowness (*Campbell et al. – examples*), longitudinal modulus (*Bennett et al. – col. 13, lines 4 – 8 and examples*), and thickness of the film (*Campbell et al., col. 2, lines 48 – 53*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

Regarding the rejection of claims 21 and 22, the base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 – 30*).

None of the above base references disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days.

Art Unit: 1773

The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

26. Claims 1 – 6, 8 – 10, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 22 of copending Application No. 10/181,506 (U.S. Patent No. 6,794,432 B2) in view of Campbell et al. ('723), Bennett et al. ('536), Murschall et al. (DE '599) and Peiffer et al. (181); - **and** –

27. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 10/181,506 (U.S. Patent No. 6,794,432 B2) in view of Campbell et al. ('723), Bennett et al. ('536), Murschall et al. (DE '599) and Peiffer et al. (181) as applied above, and further in view of Rogers et al. ('626).

The basis of main rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: luminous transmittance (*Campbell et al. – examples*), surface gloss (*Peiffer et al. – col. 9, lines 34 – 44 and examples*), haze (*Campbell et al. – examples*), yellowness (*Campbell et al. – examples*), longitudinal modulus (*Bennett et al. – col. 13, lines 4 – 8 and examples*) and type of UV stabilizer (*DE '599, pages 7 – 8*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

Regarding the rejection of claims 21 and 22, the base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 – 30*).

None of the above base references disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language

Art Unit: 1773

as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

28. Claims 1 – 6, 8 – 10, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 21 of copending Application No. 09/882,596 (U.S. Patent No. 6,855,758 B2) in view of Campbell et al. ('723), Bennett et al. ('536), Peiffer et al. (181) and as evidenced by Oishi et al. (U.S. Patent No. 5,936,048); - **and** -

29. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 09/882,596 (U.S. Patent No. 6,855,758 B2) in view of Campbell et al. ('723), Bennett et al. ('536), Peiffer et al. (181) and as evidenced by Oishi et al. (U.S. Patent No. 5,936,048) as applied above, and further in view of Rogers et al. ('626).

The basis of main rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: luminous transmittance (*Campbell et al. – examples*), surface gloss (*Peiffer et al. – col. 9, lines 34 – 44 and examples*), haze (*Campbell et al. – examples*), longitudinal modulus (*Bennett et al. –*

Art Unit: 1773

col. 13, lines 4 – 8 and examples), and thickness of the film (*Campbell et al., col. 2, lines 48 – 53*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

Regarding the type of organic phosphorous compounds, the main reference fails to claim the specific compound. However, the Examiner takes official notice that the claimed organic phosphorous compounds are known equivalents to the organic phosphorous compounds taught by Campbell et al. in the field of organic phosphorous compounds added to thermoplastics for flammability resistance, as evidenced by Oishi et al. (*col. 3, line 29 bridging col. 4, line 30 and col. 22, line 62*). Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. In the instant case, the claimed organic phosphorous compounds are known equivalents to the organic phosphorous compounds taught by Campbell et al. in the field of organic phosphorous compounds added to thermoplastics for flammability resistance. *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

Regarding the rejection of claims 21 and 22, the base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good

Art Unit: 1773

mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 - 30*).

None of the above base references disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

30. Claims 1 – 6, 8 – 10, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 18 of copending Application No. 10/084,028 (U.S. Patent No. 6,872,446 B2) in view of Campbell et al. ('723), Bennett et al. ('536), Peiffer et al. (181) and as evidenced by Oishi et al. (U.S. Patent No. 5,936,048); - **and** -

31. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 10/084,028 (U.S. Patent No. 6,872,446 B2) in view of

Art Unit: 1773

Campbell et al. ('723), Bennett et al. ('536), Peiffer et al. (181) and as evidenced by Oishi et al. (U.S. Patent No. 5,936,048) as applied above, and further in view of Rogers et al. ('626).

The basis of main rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: surface gloss (*Peiffer et al. – col. 9, lines 34 – 44 and examples*), haze (*Campbell et al. – examples*) and longitudinal modulus (*Bennett et al. – col. 13, lines 4 – 8 and examples*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

Regarding the type of organic phosphorous compounds, the main reference fails to claim the specific compound. However, the Examiner takes official notice that the claimed organic phosphorous compounds are known equivalents to the organic phosphorous compounds taught by Campbell et al. in the field of organic phosphorous compounds added to thermoplastics for flammability resistance, as evidenced by Oishi et al. (*col. 3, line 29 bridging col. 4, line 30 and col. 22, line 62*). Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. In the instant case, the claimed organic phosphorous compounds are known equivalents to the organic phosphorous compounds taught by Campbell et al. in the field of organic phosphorous compounds added to thermoplastics for flammability

Art Unit: 1773

resistance. *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

Regarding the rejection of claims 21 and 22, the base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 - 30*).

None of the above base references disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

Art Unit: 1773

32. Claims 1 – 6, 8, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 10/181,791 (U.S. Patent No. 6,872,461 B2) in view of Campbell et al. ('723) and Murschall et al. (DE '599); - **and** -

33. Claims 9 and 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 10/181,791 (U.S. Patent No. 6,872,461 B2) in view of Campbell et al. ('723) and Murschall et al. (DE '599) as applied above, and further in view of Peiffer et al. ('570); - **and** -

34. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 10/181,791 (U.S. Patent No. 6,872,461 B2) in view of Campbell et al. ('723) and Murschall et al. (DE '599) as applied above, and further in view of Rogers et al. ('626).

The basis of main rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: luminous transmittance (*Campbell et al. – examples*), yellowness (*Campbell et al. – examples*), type of UV stabilizer (*DE '599, pages 7 – 8*), and thickness of the film (*Campbell et al., col. 2, lines 48 – 53*). It would have been obvious to control the properties of the films to meet

Art Unit: 1773

applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

Regarding claims 9 and 10, Murschall et al. (DE '599) and Peiffer et al. ('570) teach adding hydrolysis stabilizers meeting applicants' claimed limitations to films in order to produce films possessing improved stability (*DE '599 – pages 6 – 7 and Peiffer et al. '570 – col. 3, lines 17 - 38*).

Regarding the rejection of claims 21 and 22, the base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 – 30*).

None of the above base references disclose the “cracking” limitation in claim 21. However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a

Art Unit: 1773

desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

35. Claims 1 – 6, 8 – 10, 19 and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 25 of copending Application No. 10/181,529 (U.S. Patent No. 6,875,803 B2) in view of Campbell et al. ('723) and Peiffer et al. ('181); - **and** –

36. Claims 21 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 16 of copending Application No. 10/181,529 (U.S. Patent No. 6,875,803 B2) in view of Campbell et al. ('723) and Peiffer et al. ('181) as applied above, and further in view of Rogers et al. ('626).

The basis of main rejection follows a similar pattern as described above with the other double patenting rejections.

The base reference fails to teach controlling the following properties, which are taught by the secondary reference as known property ranges: luminous transmittance (*Campbell et al. – examples*), surface gloss (*Peiffer et al. – col. 9, lines 34 – 44 and Table 2*), haze (*Campbell et al. – examples*) and yellowness (*Campbell et al. – examples*). It would have been obvious to control the properties of the films to meet applicants' claimed limitations depending on the desired end use of the films and the desired optimization between optical, mechanical and flame resistant qualities.

Art Unit: 1773

Regarding the rejection of claims 21 and 22, the base references are relied upon as described above. The Examiner further notes that Campbell et al. teach adding the flame retardant and optional stabilizers (e.g. a hydrolysis stabilizer) to the middle layer of the laminate and the UV resistant material to the outer layers to insure good mechanical properties and good UV resistance of the film (*col. 1, line 64 bridging col. 2, line 11; col. 8, lines 25 - 37; and col. 11, lines 26 - 30*).

None of the above base references disclose the "cracking" limitation in claim 21.

However, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

Claim Rejections - 35 USC § 112

37. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

38. Claims 1 – 6, 8 – 11, 19 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The examiner reminds the applicant(s) that any negative limitation or exclusionary proviso must have basis in the original disclosure. See *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd mem.*, 738 F.2d 453 (Fed. Cir. 1984). **The mere absence of a positive recitation is not basis for an exclusion** (see MPEP § 2173.05(i)). In the instant case, there is no proviso for the negative limitation: said low flammability is provided/imparted entirely by flame retardant consisting of one or more organic phosphorous compounds.

39. Claims 1 – 6, 8 – 11, 19 and 20 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a "low-flammability" film containing an organic phosphorous compound as a flame retardant, does not reasonably provide enablement for said low flammability is provided/imparted entirely by flame retardant consisting of one or more organic phosphorous compounds. The

Art Unit: 1773

specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The Examiner notes that all materials possess some degree of flammability, including the specific crystallizable thermoplastic used in the films, and applicants have not shown sufficient enablement to allow one of ordinary skill in the art to know whether a particular combination of a thermoplastic + an organic phosphorous would read on the claimed limitations. E.g. would a fluorinated crystallizable thermoplastic be excluded from the covered invention since it is known in the art that fluorinated compounds possess an increased flammability resistance relative to non-fluorinated compounds?

40. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

41. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "long-chain" in claim 11 is a relative term which renders the claim indefinite. The term "long-chain" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In addition, the entire scope of claim 11 is indefinite since the language of claim 11 is not clear. I.e. claim 11 (dependent from claims 9 and 1) recites the film of claim 1,

Art Unit: 1773

including 0.1 – 1.0 wt% of a hydrolysis stabilizer selected from the Markush group in claim 9. The first confusion point stems from claim 11 reciting that the organic phosphorous compounds (from claim 1) comprise either long-chain, encapsulated ammonium polyphosphates or carboxyphosphinic acids or anhydrides of these”. Do the limitations “long-chain, encapsulated ammonium” also apply to carboxyphosphinic acids and anhydrides of these”?

The second confusing point is what does “these” mean? Anhydrides of the carboxyphosphinic acids alone? Or anhydrides of either the polyphosphates or the carboxyphosphinic acids?

The third confusing point is the next phrase: “and wherein, besides the hydrolysis stabilizer, from 0.01 – 5.0 wt% of 2,2-...phenol *or mixtures of these UV stabilizers*”. The initial part is clear, that in addition to the hydrolysis stabilizer an additional component is present in the claimed wt%. However, only one compound is recited yet applicants say that one could have mixtures of *these* UV stabilizers. What other UV stabilizers are part of “these”?

The fourth confusing part is related to above: “or mixtures of at least one of these two stabilizers with other UV stabilizers”. As above, only 1 UV stabilizer is positively recited.

The final confusing part is the second recitation of the 0.01 – 5.0 wt%. This appears to be unnecessary, since the above already recited that 0.01 – 5.0 wt% of additional compounds were present.

Applicants are suggested to rewrite the entire claim in clearer fashion to better clarify what scope applicants are attempting to be covered. Given the confusion in the present claim, no prior art has been recited against this claim since it is impossible for the Examiner to adequately ascertain what scope applicants are attempting to cover.

Claim Rejections - 35 USC § 103

42. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. ('723) in view of Peiffer et al. ('181) and Murschall et al. (DE '599). See provided English Translation of DE '599.

Regarding claim 19, Campbell et al. disclose a low-flammability (*col. 2, lines 48 – 53 and examples*), UV-resistant (*col. 8, lines 25 – 27*) film made from a film forming thermoplastic (*col. 2, lines 35 – 43*) and having a thickness of from 5 to 300 μm (*col. 2, lines 48 – 53: 127 – 6350 μm*), wherein the film comprises at least one crystallizable thermoplastic (*col. 3, lines 24 – 29*), at least one UV stabilizer (*col. 8, lines 25 – 27*) and flame retardant (*col. 3, line 57 bridging col. 4, line 1*), wherein said low-flammability is provided entirely by flame retardant consisting of one or more organic phosphorous compounds (*col. 3, lines 46 – 48 and col. 3 line 57 bridging col. 4, line 1*).

Regarding claim 20, Campbell et al. disclose the above and further disclose the film satisfying the requirements of UL class 94 VTM-0 (*col. 2, lines 48 – 53 and examples*).

Campbell et al. fail to disclose the film being transparent and biaxially oriented, nor a UV stabilizer meeting the claimed limitations.

However, Peiffer et al. teach a method of forming a transparent, biaxially oriented thermoplastic film wherein such a film is taught to possess advantageous physical and barrier properties (*col. 1, lines 5 – 48*). The Examiner notes that Campbell et al. is directed to films for encasing/packaging sensitive electronic components (*col. 1, lines 5 – 30*). Regarding the UV stabilizer, the Examiner notes that Murschall et al. teach that UV stabilizers meeting applicants' claimed limitations are known UV stabilizers that are compatible with thermoplastics and cause little or no color change (*pages 7 – 8*).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Campbell et al. to be both transparent and biaxially oriented as taught by Peiffer et al. and to utilize the UV stabilizers taught by Murschall et al., since such a film would allow visual inspection of the encased sensitive electronic components while providing advantageous physical and barrier properties, along with the improved flame resistance and electrical insulation taught in the Campbell et al. invention, and would also possess stability to UV radiation without discoloration of the thermoplastic film.

43. Claims 1 – 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. in view of Peiffer et al. ('181) and Murschall et al. (DE '599) as applied above, and further in view of Bennett et al. ('536) and as evidenced by Oishi et al. ('048).

Campbell et al., Peiffer et al. and Murschall et al. are relied upon as described above.

Regarding claim 1, Campbell et al. further disclose films possessing haze values, yellowness values and luminous transmittance meeting applicants' claimed limitations (*examples*).

Campbell et al. fail to disclose a film possessing a surface gloss and longitudinal modulus meeting applicants' claimed limitations.

However, Peiffer et al. teach a film possessing improved optical properties (*col. 3, lines 23 – 41*), including surface gloss values meeting applicants' claimed limitations (*col. 9, lines 34 – 44 and Table 2*). See also DE '599 (*page 14 and examples*) for a substantially identical teaching. Bennett et al. teach controlling the modulus of elasticity of a biaxially-oriented film to meet applicants' claimed limitations since such a magnitude results in a film having high rigidity, and hence improved mechanical properties including tear resistance (*col. 13, lines 4 – 54*).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Campbell et al. in view of Peiffer et al. ('181) and Murschall et al. (DE '599) to possess surface gloss and modulus values meeting applicants' claimed limitations as taught by Peiffer et al. ('181), Murschall et al. (DE '599) and Bennett et al. since such films possess improved optical and mechanical properties.

Regarding claim 2, Campbell et al. disclose thermoplastics meeting applicants' claimed material limitations (*col. 3, lines 24 – 28*).

Regarding claim 3, Campbell et al. disclose additional coatings meeting applicants' claimed limitations (*col. 2, lines 4 – 8 and col. 10, lines 16 – 58*).

Regarding claim 4, Campbell et al. disclose amounts of flame retardant meeting applicants' claimed limitations (*col. 6, lines 3 – 20*).

Regarding claim 5, Campbell et al. disclose amounts of UV stabilizer meeting applicants' claimed limitations (*col. 8, lines 25 – 37*).

Regarding claim 6, Murschall et al. (DE '599) disclose UV stabilizers meeting applicants' claimed material limitations (*pages 7 – 8*).

Regarding claim 8, Campbell et al. fail to disclose dimethyl methylphosphonate as the organic phosphorous compound. However, the Examiner takes official notice that the claimed organic phosphorous compound is a known equivalents to the organic phosphorous compounds taught by Campbell et al. in the field of organic phosphorous compounds added to thermoplastics for flammability resistance, as evidenced by Oishi et al. (col. 3, line 29 bridging col. 4, line 30; col. 21, line 4 bridging col. 23, line 54; especially col. 22, line 62). Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. In the instant case, the claimed organic phosphorous compounds are known equivalents to the organic phosphorous compounds taught by Campbell et al. in the field of organic phosphorous compounds added to thermoplastics for flammability resistance. *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

Regarding claim 9, Murschall et al. (DE '599) disclose hydrolysis stabilizers meeting applicants' claimed composition and weight percent limitations (*pages 6 – 7*).

Art Unit: 1773

44. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. in view of Peiffer et al. ('181), Murschall et al. (DE '599) and Bennett et al. ('536) and as evidenced by Oishi et al. ('048) as applied above, and further in view of Peiffer et al. ('570).

Campbell et al., Peiffer et al. ('181), Murschall et al. (DE '599) and Bennett et al. are relied upon as described above.

None of above disclose the specific hydrolysis stabilizer as claimed in claim 10.

However, Peiffer et al. ('570) teach that the claimed stabilizers are "particularly advantageous" for adding to biaxially oriented thermoplastic films (*col. 1, lines 4 – 16 and col. 3, lines 17 – 39*).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Campbell et al. in view of Peiffer et al. ('181), Murschall et al. (DE '599) and Bennett et al. to use the claimed hydrolysis stabilizers as taught by Peiffer et al. ('570) since they are taught to be "particularly advantageous" for adding to biaxially oriented thermoplastic films.

45. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. in view of Rogers et al. ('626) and Peiffer et al. ('181).

Regarding claim 21, Campbell et al. disclose a low-flammability (*col. 2, lines 48 – 53 and examples*), UV-resistant (*col. 8, lines 25 – 27*) multi-layered film (*col. 1, line 64 bridging col. 2, line 7*) having a thickness of from 5 to 300 μm (*col. 2, lines 48 – 53: 127 – 6350 μm*), said film comprising a core (i.e. applicants' "base") layer between two outer

Art Unit: 1773

layers (*col. 1, line 64 bridging col. 2, line 7*), said film further comprising a crystallizable thermoplastic (*col. 3, lines 24 – 29*), UV stabilizer in said outer layers alone (*col. 8, lines 25 – 27*) and flame retardant in said base layer alone (*col. 3, line 57 bridging col. 4, line 1 and col. 11, lines 26 - 30*), said film complying with the conditions of UL 94 (*col. 2, lines 48 – 53 and examples*).

Campbell et al. fail to disclose the film being transparent and biaxially oriented, nor meeting the claimed cracking limitations.

However, Peiffer et al. teach a method of forming a transparent, biaxially oriented thermoplastic film wherein such a film is taught to possess advantageous physical and barrier properties (*col. 1, lines 5 – 48*). The Examiner notes that Campbell et al. is directed to films for encasing/packaging sensitive electronic components (*col. 1, lines 5 – 30*). Regarding the cracking limitation, Rogers et al. teach a film, wherein the film maintains at least 50% of its tensile strength (*see examples*) when exposed to temperatures of 121 °C for 9 days. The examiner has taken the position that this is a substantially identical teaching to teaching that the film does not embrittle (i.e. does not exhibit surface cracking) when weathered in accordance with ISO 4892 according to the claimed limitations. While the Examiner acknowledges that Rogers et al. does not explicitly state the same language as recited in the claim, the Examiner deems that one of ordinary skill in the art would have appreciated that lack of surface cracking/loss of tensile strength/embrittlement is a desired quality in polymeric films and that the Rogers et al. invention provides a means to achieve a highly durable film.

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Campbell et al. to be both transparent and biaxially oriented as taught by Peiffer et al. and to meet applicants' claimed surface cracking limitations as taught by Rogers et al., since such a film would allow visual inspection of the encased sensitive electronic components while providing advantageous physical and barrier properties, along with the improved flame resistance and electrical insulation taught in the Campbell et al. invention, and would also possess improved weathering characteristics by resisting surface cracking.

46. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. in view of Peiffer et al. ('181) and Rogers et al. as applied above, and further in view of Peiffer et al. ('570).

Campbell et al., Peiffer et al. ('181) and Rogers et al. are relied upon as described above.

None of above explicitly disclose adding a hydrolysis stabilizer to the base layer alone, though Campbell et al. does teach adding stabilizers to the base layer (*col. 5, line 60 bridging col. 6, line 2*).

However, Peiffer et al. ('570) teach preferentially adding hydrolysis stabilizers to biaxially-oriented thermoplastic resins in order to improve the hydrolysis resistance of these materials (*col. 1, lines 5 – 16 and col. 3, lines 17 – 39*).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Campbell et al. in view of Peiffer et

al. ('181) and Rogers et al. to add a hydrolysis stabilizer to the base layer alone as taught by Peiffer et al. ('570) since Campbell et al. teach adding the general class of stabilizers to the core layer and Peiffer et al. ('570) teach hydrolysis stabilizers that are "particularly advantageous" for improving the properties of a biaxially-oriented thermoplastic resin.

Response to Arguments

**47. The rejection of claims 1 – 6, 8 – 11 and 19 - 22 under 35 U.S.C § 103(a) –
Various references**

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

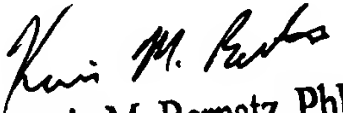
Conclusion

48. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Bernatz whose telephone number is (571) 272-1505. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMB
November 18, 2005


Kevin M. Bernatz, PhD
Primary Examiner